

## **Beneficial Re-Use Plan for the Makakilo Quarry**



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**Makakilo Quarry  
Tax Map Keys (1) 9-2-003:074 and 082 (Portions)  
Makakilo, District of 'Ewa, O'ahu, Hawai'i**

*Prepared for:*

**STATE LAND USE COMMISSION**

Prepared in compliance with Section 205-6, Hawai'i Revised Statutes,  
Sections 12-15-95, Hawai'i Administrative Rules and,  
Condition 10, Special Use Permit, Docket Number SP73-147. November 7, 2008.

*and*

**DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU**

Prepared in compliance with Sections 25.5.520 and 21-2.90, Revised Ordinances of Honolulu,  
Condition 3, Conditional Use Permit (Major), File Number 72/CUP-15. July 17, 2009.

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## EXHIBITS

1. Special Use Permit, Docket Number SP73-146
2. Conditional Use Permit, File Number 2007/CUP-91
3. Permits and Approvals for the Operation of Makakilo Quarry
4. Closure Grading Plan
5. Renaturalization Plan Submittal
6. Engineering Report
7. DPP Exhibit 24 Comments
8. DPP Exhibit 28 Comments
9. View of ‘Ewa
10. Prior Re-Use Plan
11. Summary of Resource Extraction to Date
12. Makakilo Quarry Excavation and Renaturalization Areas
13. Closure Grading Plan (Cross-Sections)

## ACRONYMS AND ABBREVIATIONS

CCH	City and County of Honolulu
CUP	Conditional Use Permit
DP	Development Plan
DPP	Department of Planning and Permitting (City and County of Honolulu)
HAR	Hawai‘i Administrative Rules
HRS	Hawai‘i Revised Statutes
LUC	Land Use Commission
MGD	Million Gallons Per Day
MW	Megawatt
PV	Photovoltaic
ROH	Revised Ordinances of Honolulu
SUP	Special Use Permit
TMK	Tax Map Key
UIC	Underground Injection Control



## 1.0 Purpose of the Beneficial Re-Use Plan

The purpose of this Beneficial Re-Use Plan (Plan) update is to comply with Condition 10 of Makakilo Quarry's Special Use Permit docket number SP73-147 (the SUP), and with Condition 3 of the Conditional Use Permit file number 2007/CUP-91 (the CUP).

Condition 10 of the SUP states:

*The Applicant shall provide a beneficial re-use plan for lands disturbed by its Quarry operations. The plan shall include planning and preparation of design and implementation scenarios for the beneficial re-use of the "pit" area consistent with established land use policies for the site and surrounding area. The re-use planning document and accompanying scenarios and drawings shall be submitted to the Department of Planning and Permitting, for review and approval within the fifth (5th) year after the date of the Land Use Commission's Decision and Order approving this expansion. An updated re-use plan shall be submitted to the DPP for review and approval every five (5) years thereafter. The beneficial re-use planning and design document shall be an ongoing document prepared by a professional qualified in re-use planning and contain objectives, implementation and funding strategies for reclamation of the pit area for the purpose of achieving the area's long term land use policies. The Applicant will update the plan, as may be required by the Director of the Planning and Permitting, to respond appropriately to any changes in the surrounding area's land use policies.*

*The beneficial re-use plan shall include at least one public access across Tax Map Key: 9-2-03: 81 and the extension of Makakilo Drive, across the project in which safe pedestrian/bicycling passage can be established. Access requirements, such as but not limited to, subdivision, nature of improvements, routing, hours accessible, shall be established as part of the final beneficial re-use plan. Suggested routing of the public access is shown on Exhibit A.*

In addition to the SUP, Condition 3 of the CUP states:

*On the fifth anniversary date of this Decision and Order, and an update every fifth year thereafter, as may be required by the Planning Director, the applicant shall submit a Beneficial Re-Use Plan which shall show how the property is to be left in a form suitable for reuse for purposes permissible in the district, relating such reuses to existing or proposed uses of surrounding properties. Among items to be included in the plan are feasible circulation patterns in and around the site, the treatment of exposed soil or subsoil, including measures to be taken to replace topsoil or establish vegetation in excavated areas in order to make the property suitable for the proposed reuse, treatment of slopes to prevent erosion and delineation of floodways and floodplains (if any) to be maintained in open usage. Submittal of the Beneficial Re-Use Plan under Condition 10 of the Land Use Commission Decision and Order, dated November 7, 2008, may satisfy the requirements of this condition (providing the Re-Use Plan complies with Land Use Ordinance Section 5.520, Specific Use Development Standards, for Resource Extraction).*

This Plan update presents Grace Pacific LLC's updated long term re-use objectives and strategy, and operational plans for the Makakilo Quarry (Quarry). This update will be followed by updates every five years until expiration of permits and Quarry closure.

The Plan outlines future land use alternatives that are permissible in the district in which it is situated. Circulation patterns in and around the Quarry are addressed by including the construction of a new access road that would connect to the future Makakilo Drive extension and a pedestrian connection across the top of the site. All exposed soil in excavated areas will be revegetated irrespective of the chosen re-use scenario that is determined. Further, the 303.6-acre buffer site immediately surrounding the active Quarry will remain in its natural state as shown in Figures 9-12. A grading closure plan and renaturalization plan were also prepared for the site and are included in this plan in Figures 9-12.

Two scenarios for use of the site after quarry activities cease are presented in the updated Plan for which five concept alternatives are included. The first scenario presents four re-use alternatives (i.e. renaturalization, active or passive recreation, agriculture, and energy production) within the existing land use policies for the Quarry and surrounding area. The second scenario describes potential urban re-use alternatives (i.e. residential, commercial, and light industrial mixed use) which take into account the possibility of future changes in state and county land use designations for the Quarry and greater region, and improvements to infrastructure that may occur.

As the date for the Quarry closure draws nearer, it is anticipated that the plans for the re-use of the site will become more definitive. It is expected that the surrounding communities of Kapolei, Makakilo, and Ho'opili will continue to change over time and that the area's long term land use plan, the 'Ewa Development Plan (DP), will be updated before the current expiration date of the SUP and CUP in 2032 to reflect a more up-to-date vision for the future of the area. Additionally, the East Kapolei Transit Oriented Development Plan created in 2021 envisions three vibrant neighborhoods along the rail line at the Honouliuli, Keone'ae, and Kualaka'i rail transit station areas. After closure, Grace Pacific intends to transition use of the Quarry area consistent with regional land use plans, the values of the surrounding communities and this Plan.

### **Site Description and Permitting History**

The Quarry has been in operation since 1973 and is presently operated by Grace Pacific LLC. It is located in the 'Ewa District on the island of O'ahu as shown in Figure 1. The Quarry site (shown in Figure 2) is located within Tax Map Keys (TMKs) (1) 9-2-03: 074 and 082 as shown in Figure 3 below.

First granted in 1973, the SUP was revised in November 2008 to extend the life of the quarry resource extraction and aggregate processing operations to 2032 and expand the resource and expansion buffer areas of the quarry on TMK (1) 9-1-16: 004 (outside of the quarry pit area) and 9-2-003: Portion of 074 and 082. The permit now covered a total of 541.5 acres of the property.

The CUP for Quarry operations was granted to the James Campbell Estate and its licensee Grace Pacific Corporation<sup>1</sup>, now Grace Pacific LLC, subject to conditions on 488.4 acres. The CUP

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<sup>1</sup> Parcel 74 first purchased by Grace Pacific in 1994. Parcel 82 was purchased by Grace Pacific in 2008.

provides a set of requirements for the closure of the Quarry. As of July 17, 2009, the permit was amended to expand the quarry excavation area from 78.4 acres to 105.8 acres and decrease the buffer area surrounding quarry from 188 acres to 114.7 acres. The permit now covers a total of 488.4 acres which includes the access road. The permit extends use and associated operations to the year 2032.

Quarrying activities will continue to adhere to the requirements of the Land Use Ordinance (LUO), Section 21-5.520. Compliance for the exploitation phase of the Makakilo Quarry has been met by adhering to SUP conditions 1-16, and CUP conditions 1-9. Grace Pacific has submitted annual Compliance Reports demonstrating the status of compliance with the conditions of the SUP and CUP. The latest annual report was prepared on February 5, 2021 for the time period from October 1, 2019 through September 30, 2020. The next annual report will be filed in February 2023, and cover the period from October 1, 2021 through September 30, 2022.

Grace Pacific has a potential interest to modify the boundaries of the Quarry, operate at extended hours and lengthen Quarry activities up to an additional 15 years beyond the year 2032. Grace Pacific intends to submit applications for SUP and CUP modifications. Until such time that new SUP and CUP applications are submitted and approved, Grace Pacific will remain in compliance with the conditions of the current SUP and CUP.



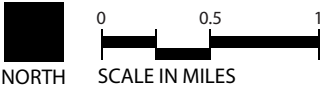
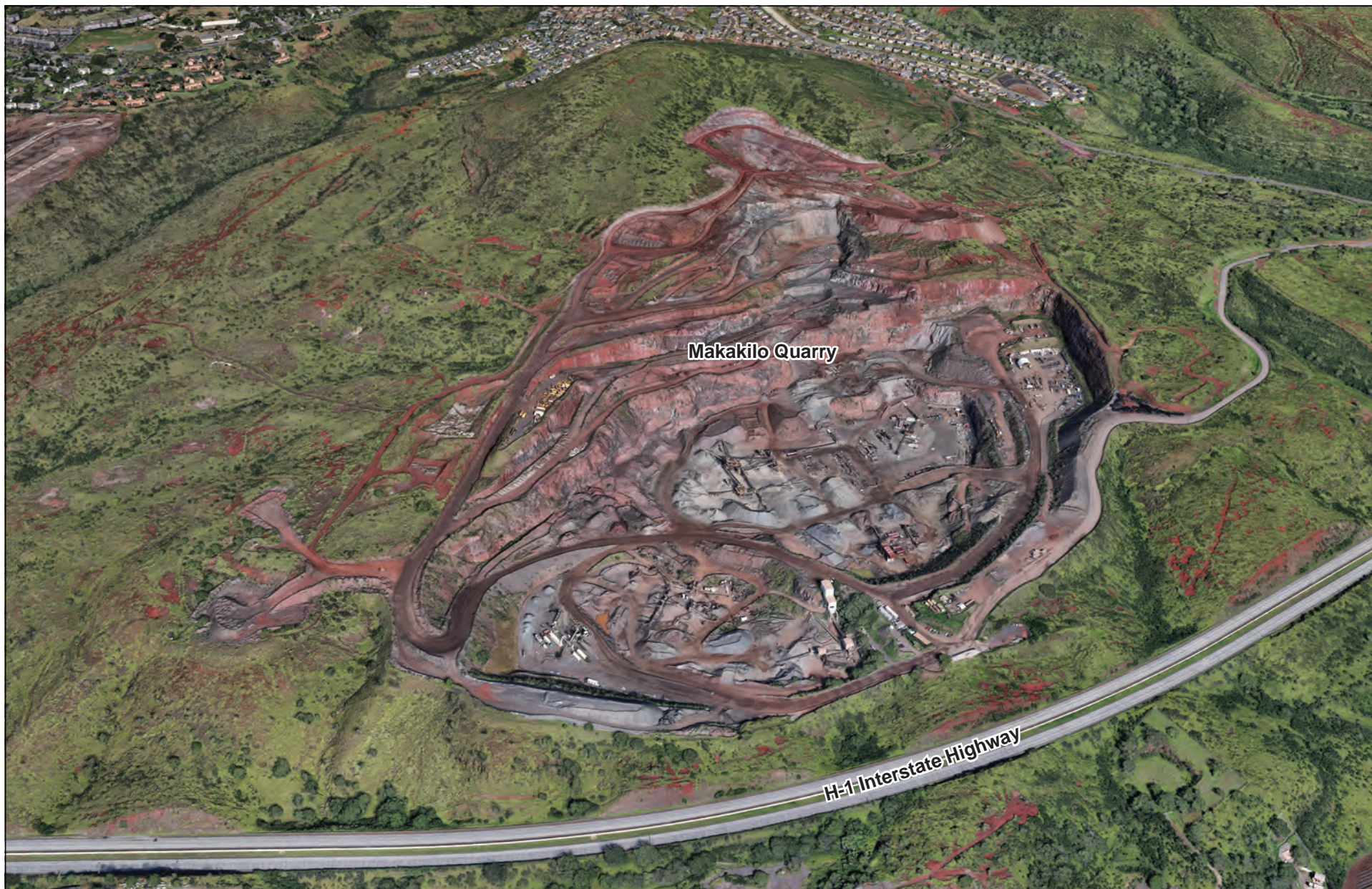


Figure 1  
Makakilo Quarry Location Map





NORTH



SCALE IN FEET

**Figure 2**  
**Makakilo Quarry Existing Conditions**





NORTH

0 600 1200  
SCALE IN FEET

Figure 3  
Makakilo Quarry Parcel Map

## **2.0 Compliance with Regulations and Approved Land Use Plans**

In addition to the SUP and CUP permits, the Plan and update were prepared to be in compliance with state and county regulations and approved land use plans. Other land use ordinances or governmental agencies' requirements are subject to separate review and approval. Grace Pacific is responsible for ensuring the project to complies with all applicable provisions of the LUO and other governmental agencies' provisions and requirements, as stated in SUP Condition #11.

### **2.1 Hawai'i Revised Statutes (HRS), Chapter 205, Land Use Commission**

The Quarry site is within the State Agricultural Land Use District. The total Quarry area includes a buffer that is approximately 303.6 acres, and a working area of the Quarry which is approximately 184.4 acres. HRS, Section 205-6, and the supporting Hawai'i Administrative Rules (HAR), Sections 15-15-95 and 15-15-96, provide guidelines for approval of an "unusual and reasonable" use such as resource extraction within the State Agricultural District. In accordance with the November 2008 LUC Conclusions of Law for the State SUP (72/SUP-1 by the CCH Planning Commission), Item 2, resource extraction at the Quarry site is a permitted use that "generally meets the guidelines for determining an 'unusual and reasonable' use within the State Land Use Agricultural District."

### **2.2 Revised Ordinances of Honolulu (ROH), Chapter 21, Land Use Ordinance (LUO), Section 21.5.520, Resource Extraction**

ROH, Chapter 21, provides the framework for granting a CUP for resource extraction land uses on O'ahu in accordance with Article 5, *Specific Land Use Development Standards*, Section 21.5.520, *Resource Extraction*. This section states:

- (a) Blasting operations shall be restricted to Mondays through Fridays between 8 a.m. and 5 p.m.
- (b) The plan to be submitted with the application for a conditional use permit shall include a plan for development of the property which shall consist of two phases: the exploitation phase and the reuse phase.
  - (1) The plan for the exploitation phase shall show the proposed development as planned in relation to surrounding property within 300 feet, and shall include topographic surveys and other materials indicating existing conditions (including drainage) and the conditions (including topography, drainage and soils) which shall exist at the end of the exploitation phase. Contour intervals for topography shall be five feet in areas where slope is greater than 10 percent, two feet in areas where slope is 10 percent or less.
  - (2) The plan for the reuse phase shall indicate how the property is to be left in a form suitable for reuse for purposes permissible in the district, relating such reuses to uses existing or proposed for surrounding properties. Among items to be included in the plan are feasible circulation patterns in and around the site, the treatment of exposed soil or subsoil (including measures to be taken to replace topsoil or establish vegetation in excavated areas) in order to make the property



suitable for the proposed reuse, treatment of slopes to prevent erosion and delineation of floodways and floodplains (if any) to be maintained in open usage. In the plan for reuse, intermittent lakes and marshes shall not be allowed, except in areas included in flood hazard districts and if situated more than 1,000 feet from the nearest residential, apartment, apartment mixed use or resort zoning district boundary.

(Added by Ord. 99-12)

## **2.3 General Plan, City and County of Honolulu**

Among the land use planning and policy documents prepared by DPP, the CCH General Plan (General Plan) sets comprehensive guidelines governing development on O‘ahu. As stated in the introduction to the General Plan (revised 2021):

The General Plan for the City and County of Honolulu is a comprehensive statement of objectives and policies that sets forth the long-range aspirations of O‘ahu’s residents and the strategies to achieve them. It is the first tier of and lays the foundation for a comprehensive planning process that addresses physical, social, cultural, economic and environmental concerns affecting the City and County of Honolulu. This planning process serves as the coordinative means by which the City government provides direction to the population projected for O‘ahu.

The general development standards for quarries are provided in Section III, Natural Environment. The General Plan defines quarries as mountains that must be restored to a natural looking state at the time of Quarry closure. The General Plan states:

Objective A, To protect and preserve the natural environment.

Policy 2, Seek the restoration of environmentally damaged areas and natural resources.

Policy 6, Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.

Objective B, To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.

Policy 1, Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reefs and offshore islands.

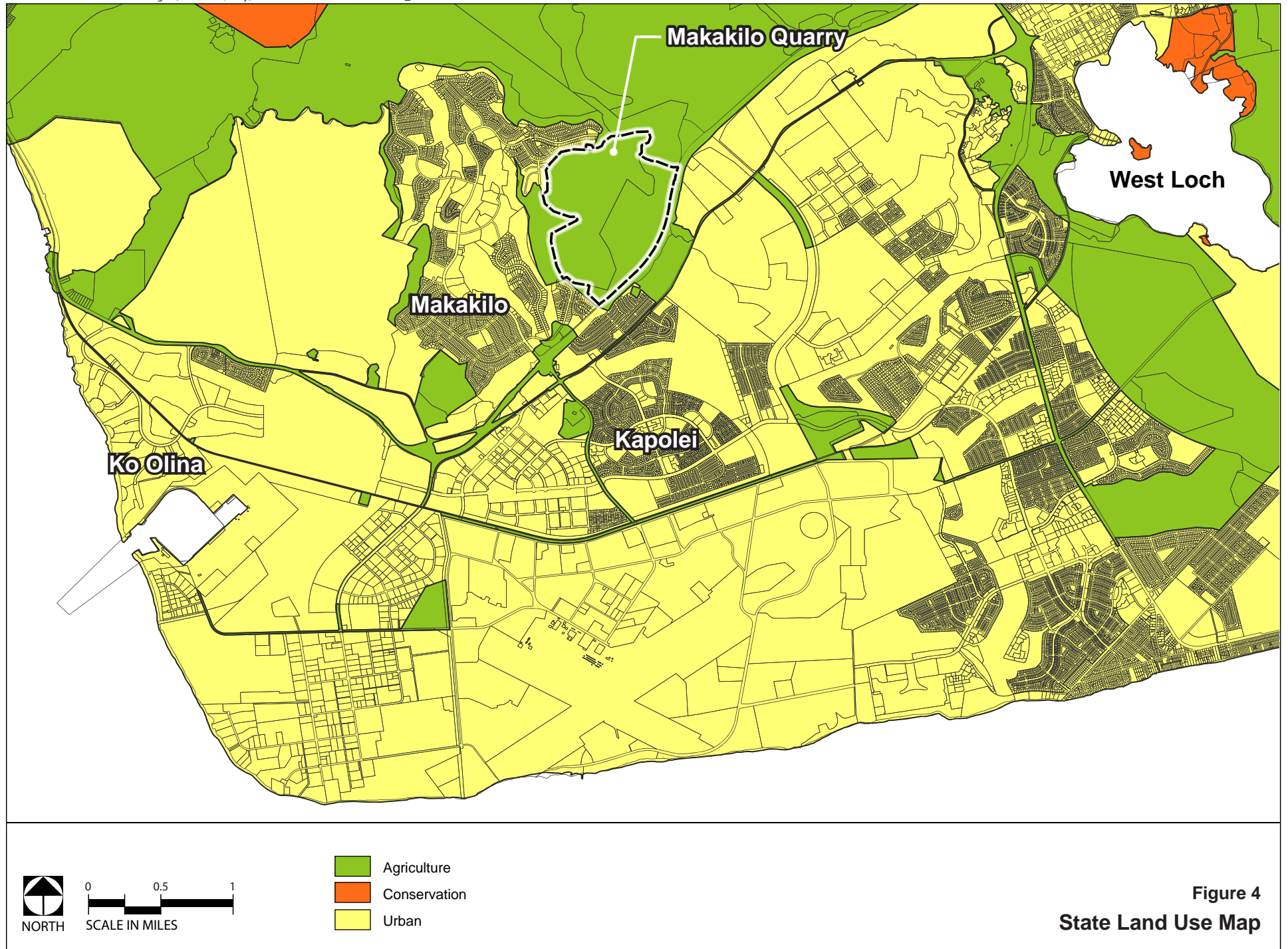
Policy 2, Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas.

The Quarry is zoned AG-2, as shown in Figure 6.

The General Plan defines purpose of the agricultural districts is to maintain a strong agricultural economic base, to prevent unnecessary conflicts among incompatible uses, to minimize the cost of providing public improvements and services and to manage the rate and location of physical development consistent with the city's adopted land use policies.



The General Plan states “the intent of the AG-2 general agricultural district is to conserve and protect agricultural activities on smaller parcels of land.”



**Figure 4**  
**State Land Use Map**



NORTH

0

500

1000

SCALE IN FEET

**Figure 5**  
**Makakilo Quarry Site Acreages**